Addenda #49, July 2024

Re: Ch.12, Sustainable Production SDG 12 - Ensure sustainable consumption and production patterns

Farmers create chaos outside an EU summit and wrest some promises of relief AP, February 1, 2024

Farmers' protests have erupted across Europe. Here's why CNN World, February 10, 2024 *"We are no longer making a living from our profession," one aggrieved farmer in Paris told CNN.*

Frustrated farmers are rebelling against EU rules. The far right is stoking the flames AP, April 18, 2024

As Europe seeks to address the threat of climate change, it's imposing more rules on farmers like Ubels. He spends a day a week on bureaucracy, answering the demands of European Union and national officials who seek to decide when farmers can sow and reap, and how much fertilizer or manure they can use. Meanwhile, competition from cheap imports is undercutting prices for their produce, without having to meet the same standards. Mainstream political parties failed to act on farmers' complaints for decades

Across much of the 27-nation EU, from Finland to Greece, Poland to Ireland, farmers' discontent is gathering momentum as June EU parliamentary elections draw near.

The *European Green Deal*, approved by the European Union Parliament in 2020, is a series of climate policy initiatives to fight climate change and "environmental degradation" across all 27 member states of the European Union. These policies were written by the European Commission, a cabinet of 27 commissioners, each appointed by the political leaders of those member states for a five-year term. The Commission is overseen by a president, also elected by the heads of the EU member states. There is no oversight or accountability to the public.

When the Commission President Ursula von der Leyen unveiled the plan in late 2019, she vowed to "<u>leave no-one behind</u>". Interestingly, these same claims are found in the goals of the United Nations Sustainable Development Agenda; agenda 2030.

"The Agenda remains the world's roadmap for ending poverty, protecting the planet and tackling inequalities. The 17 SDGs, the cornerstone of the Agenda, offer the most practical and effective pathway to tackle the causes of violent conflict, human rights abuses, <u>climate change</u> and <u>environmental degradation</u> and aim to ensure that <u>no one will be left behind</u>.

17 Goals for People, for Planet; The Sustainable Development Agenda, United Nations

"Our goal is to reconcile the economy with our planet... the way we produce and consume" President Ursula von der Leyen stated. Part of this reconciliation was the Commissions "Farm to fork strategy". "... the new strategy will aim for a "green and healthier agriculture" system. This includes plans to "significantly reduce the use of chemical pesticides, fertilisers and antibiotics... New national strategic plans due to be submitted next year by member states under the Common Agricultural Policy <u>will be scrutinised</u> to see whether they are aligned with the objectives of the Green Deal.

Sustainable "Alternative" Fuels

The *Green Deal* included replacing diesel fuel, which farm equipment operates on, with "sustainable alternative fuels", such as *biofuels*, which have emerged as an alternative to diesel in recent years. Biofuels can be produced from corn and soybean, as well as from animal fats and agricultural waste. Biofuels are sustainable compared to diesel fuel, but they come with significant disadvantages.

Land conversion required to produce plant base sources of biofuel affect natural habitats and loss of biodiversity. This conversion also incentivizes farmers to shift from growing food crops to growing biofuel crops, in order to cash in on government subsidies. This can lead to food shortages and food insecurity. Biofuels can also require significant amounts of water for irrigation and processing, leading to water depletion and shortages for other water uses, including water for households, or for food production. Biofuel crops, such as corn and sugarcane require high water demand as well as pesticides that protect them against insects, weeds, and diseases.

From 2006 to the summer of 2008, there was a global surge in agricultural commodity (crop) prices, leading to significant increases in high food prices, civil unrest and "food security crisis" in many developing countries. The World Bank published an assessment paper, which in part, cited the increasing use of biofuels as a factor in rising prices.

"Since many countries have announced more ambitious future targets for domestic biofuel use, implying the need for further expansion in global biofuel production going forward, a key question is how much future global biofuel expansion <u>could lead to longer-term</u> <u>increases in food scarcity and hunger</u>, especially among regions and populations at risk. A second concern has emerged regarding <u>the environmental impact of biofuels</u>, and in particular, their local and global <u>impact on land-use</u> and carbon release. Many stakeholders now question the urgency of further developing biofuels because of this triple global interface between food, bioenergy and the environment."

The Impacts of Biofuel Targets on Land-Use Change and Food Supply – A Global CGE Assessment; The World Bank Development Research Group, December 2010

The effects of conversion to biofuels; affecting natural habitats including deforestation and loss of biodiversity, overuse of and shortages of water, increased food prices, increased land values (and taxes paid on that land), food scarcity and hunger, and... goes directly against at least 4 of the 17 U.N. Sustainable Development Goals in order to solve one other goal.

At this point, biofuels are not compatible with all types of farm vehicles and equipment, without modification to both the equipment and fueling infrastructure, to prevent damage to both. Researchers are working on developing biofuels that will be more compatible for use, but this may take years to achieve, and to produce in quantities that will be required to power the entire fleet of farm equipment over the entire European Union.

Biodiesel fuels are also fairly energy intensive to make and many of the steps used to create biofuels may emit CO₂ and other greenhouse gases even before the fuels are burned. Ref: Advantages and Disadvantages of Biofuels; Greentumble, Jan. 13, 2023 Ref: Biofuel; MIT Climate Portal, Sept. 3, 2020

Sustainable Organic Fertilisers

Chemical fertilizers are synthetically made using nitrogen, phosphate and potash (potassium). They provide immediate nutrients to the soil, promoting rapid plant growth and higher crop yields. Incorrect or overuse of chemical fertilizers can cause environmental pollution, soil degradation and disrupt natural microorganisms in the soil. Production and use of nitrogen fertilizers also produces greenhouse gas emissions and may be responsible for 2% of all global CO₂ emissions.

Organic fertilizers are derived from natural sources. They are supposed to improve soil fertility and release nutrients more slowly, reducing over-fertilization and the risk of nutrient leaching. Organic fertilizers can be "plant-based": alfalfa, corn, or soybean meal, seaweed and kelp. They can also be "animal-based": chicken, cow or horse manure, bat guano, fish meal or fish emulsion from leftover fish "parts" and decomposed fish, or bone meal and blood meal made from the blood of butchered animals.

Organic fertilizers require larger quantities to provide the same nutrients and take longer to release them, resulting in delayed growth and as much as 10 to 20% lower crop yield. This does nothing to help reduce "food insecurity" in a growing population.

Plant-based organic fertilizers may contain weed seeds that harm plant growth and require additional labor to control their spread. Animal-based organic fertilizers may contain bacterial or fungal "soil pathogens" which can cause serious human infections or diseases; no surprise considering what they are made from.

In addition to the larger quantities required to fertilize crops and the additional labor required to control weeds, organic fertilizers are also more costly to manufacture, which increases the prices of organically grown crops. It also costs farmers a considerable amount of time and money to have the government approve them as an organic farm. Buying organically grown food comes at an increased cost to consumers, often twice as much as purchasing food grown using chemical fertilizers. This is a significant problem for many families already struggling with higher prices

Ref: Organic vs Chemical Fertilizers: A Comparison; The Farming Insider; July 8, 2024 Ref: Our List of the Best 15 Common Organic Fertilizers; The Gardening Channel

> Agricultural Emissions

Gassy cows and pigs will face a carbon tax in Denmark — a world first Denmark will tax livestock farmers for the greenhouse gases their animals emit, starting in 2030. NBC News, June 26, 2024 Note: Methane emissions are a significant contributor of GHG emissions and trap about 87 times more heat in the atmosphere than carbon dioxide. Methane emissions from livestock account for about one-third of all human-caused methane emissions.

The "Taxation Minister" of Denmark, Jeppe Bruus, said the goal of this carbon tax is to reduce greenhouse gas emissions by 70% from 1990 levels by 2030.

According to the European Environment Agency, 1990 GHG emissions of Denmark were 78,332 kt (kilotons), so that 2030 target would be 23,500 kt.

Emissions in Denmark for 2022 are shown as 41,674 kt, a reduction of 46.7% over 32 years, or 1.46% per year on average. To reach the Taxation Ministers goal, Denmark must reduce emissions another 43.6% in just 8 years. That's double the rate of decline since GHG emissions peaked in 1996.

Denmark will begin taxing farmers on livestock emissions in 2030, beginning at the equivalent of \$17.2 per ton (after income tax deduction) in 2030, increasing to \$43.2 per ton within five years.

Here's where I get to exercise my napkin math again...

The "typical" Danish cow produces 6.6 tons of CO2 equivalent per year.

6.6 tons x \$17.20 = \$113.52 per cow in 2030, \$285.12 per cow in 2035.

The number of dairy cows in Denmark is 110 cows per herd.

The "typical" Danish dairy farmer will pay a carbon tax of \$12,487 in 2030, and \$31,363 in 2035.

What was U.N. Agenda 2030 Sustainable Development Goal #2 again? Goal 2. End hunger, <u>achieve food security and improved nutrition</u> and promote sustainable agriculture

According to the Danish Agricultural & Food Council, exports of dairy products, in particular cheese, preserved milk products and butter, account for more than 20 percent of all Danish agricultural exports. The largest market for Danish dairy products is the other EU countries. It looks like dairy products in Denmark and the rest of European Union countries will get significantly more expensive over the coming years. And this helps achieving food security, how?

Note: Bruus is a member of the Party of European Socialists (PES). The PES "Mission Statement" is to "make Europe work for its people… We fight for a Europe that leaves no-one behind." Now where have we heard that statement before??

Consumer Backlash and Voter Unrest

Other measures to implement the European Green Deal that impact farmers, include a tax on carbon, pesticide bans, nitrogen emissions curbs, restrictions on water and land usage and

cuts in diesel fuel tax breaks. Governments have granted concessions, but farmers say they do not go far enough and are calling for continued action. The protests have also fueled backlash against the candidates running in European Parliament elections in June.

Last year the *Farmer-Citizen Movement* or BoerburgerBeweging (BBB) grew out of mass demonstrations against the government's environmental policies. The BBB received 20% of the vote in the March 2023 elections, winning 15 of the Senate's 54 seats. The BBB vowed to fight government plans to slash nitrogen emissions by dramatically reducing livestock numbers and buying out thousands of farms.

In the June 2024 elections, "far-right" populist candidates won major gains in the 720 European Parliamentary seats, shifting control to those candidates who had campaigned against the Green Deal as well as uncontrolled migration. Support for Germanys Social Democrats fell to a post-World War II low, while the environmentalist Greens fell to a five-year low support of 12%. The Christian Democrat Union party shifted farther right on immigration and climate change in order to stave off the threat of the far-right Alternative for Germany Party, which took 17% of the national vote.

In Italy, the national-conservative and right-wing populist political party, Brothers of Italy won 29% of the European parliamentary election vote, more than four times the number of seats it took in the 2019 election.

Especially notable were the elections in France on June 9th, where the rebranded nationalist National Rally party received 31% of the vote of the French contingent of the EU parliament. French President Emmanual Macron immediately dissolved the national parliament and called for new elections to be held, saying they were needed to "clarify" the political situation.

Yes, this is Democracy in action in the European Union. The government puts radical climate change policies in place without voter discussion or approval... Voters express their disapproval and replace their elected leaders... Leaders cancel the votes of the people.

Legislative Update.... In Frances "snap election", political bargaining between left-wing and centrist candidates to give voters more moderate choices led to a different result. The left-wing New Popular Front party received 32% of the vote while the National Rally party fell to third place, taking only 24%. This resulted in a politically divided French parliament, and doubt of being able to effectively govern the French people. The results also prompted a warning by rating agency Moody about the country's credit rating, and ability to bring the countries deficit spending under control.

Addenda #50, July 2024

Re: Ch.17, S,D.G. Enforcement by Global Organizations SDG 17 – Strengthen the means of implementation and revitalize the global partnership for sustainable development

"With just under ten years left to achieve the Sustainable Development Goals, world leaders at the SDG Summit in September 2019 called for a Decade of Action and delivery for sustainable development, and pledged to mobilize financing, enhance national implementation and strengthen institutions to achieve the Goals by the target date of 2030, leaving no one behind."

The Sustainable Development Agenda; United Nations Sustainable Development Goals web page

On 24 April 2024, the European Parliament voted to adopt the *Corporate Sustainability Due Diligence Directive* (CSDDD). The CSDDD imposes "due diligence" reports on how company activities adversely affect human rights: slavery, child labor, and labor exploitation, of every European Union company and non-EU company doing business in the EU. Every corporation with more than 1,000 employees and certain income thresholds, will be required to investigate each and every company they do business with, to ensure there are no violations of human rights in accordance with EU Parliament guidelines. The directive also applies to companies that rely on franchise or license models. McDonalds and Starbucks are examples of franchisers, selling the right for others to use their name and sell their products, while Walt Disney Company and Iconix International are licensors giving other companies the right to market consumer brand name products.

Every company up and down that primary companies supply chain: producers, vendors, warehouses, transportation companies, distribution centers, and retailers selling the final product(s), every single company and organization that handles a product along the way from providing source materials to retail stores selling the finished product will have to provide an accounting of the goods and services <u>they</u> provide, to ensure there are no human rights violations occurring anywhere in that supply chain.

Each company doing business in any of the 27 EU nations, will have to provide that detailed information through a CSDDD portal to their own government. That governments "supervisory authority" will then be responsible for examining the information (due diligence) and impose penalties against any company found to have violations of human rights anywhere along its own supply chain, or for failing to provide the information (failing to cooperate). If companies are in violation of the due diligence obligations, they will be required to "fully compensate" their victims. All companies meeting the employment and income thresholds of the CSDDD will have between 2 ½ and 4 ½ years to do their due diligence and resolve any violations before the penalties begin.

Just think of the immense task each company will have in just sending out questionnaires to supply chain members, compiling that information and then submitting it to the government supervisory authority. And then enforcing the same standards on each of those supply chain

companies to remain in compliance with the CSDDD. Each company will have to have a due diligence division to handle all the data collection and a supervisory division to keep their supply chain companies in compliance, increasing the cost of doing business in the EU and requiring additional revenues through the sale of their goods and services to fund these new divisions.

Companies not in compliance will face *"significant financial penalties and civil liability."* The cost of doing business in the EU is about to get more expensive for the companies who sell goods and services, and the cost of living is about to get more expensive for the consumers who purchase those goods and services.

There is a second part to the *Corporate Sustainability Due Diligence Directive*. It also creates a new <u>obligation</u> for companies to adopt and put into effect a "climate transition" plan, to ensure that each company as previously described, doing business in the EU will meet the objectives of the 2015 United Nations Framework Convention on Climate Change, known as the Paris Agreement. Each company and all of their supply chain partners will be required to commit to the net zero greenhouse gas (GHG) emissions by 2050, and all interim targets for 2030 and 2040.

Each company's <u>climate transition plan</u> must include "science-based", time-bound targets covering Scope 1, 2 and 3 GHG emissions for 2030 – <u>and every five years after until 2050</u>.

Scope 1 emissions are greenhouse gasses that the company itself puts into the atmosphere in the course of doing business.

Scope 2 emissions come from the electricity the company itself buys from the electrical grid. Even though that electricity purchased comes from a power plant in a neighboring nation, the company itself is held solely responsible for their emissions. The company can reduce its own responsibility burden, for example, it can use less electricity. Scope 3 emissions include all other *indirect sources* of greenhouse gases from the company's operations. These might be connected with the day-to-day running of the company: for instance, if a company's employees drive to work, the gasoline they burn falls under scope 3. These emissions are also connected with their supply chain partners, which include the eventual purchaser, like when a car company sells a car, which someone then fills with gas, creating more scope 3 emissions.

In this new dystopian world of doing business in the European Union, everyone will be responsible for the transgressions of everyone else their businesses and lives touch. Reporting transgressions and putting pressure on others to conform will be the new normal in the European Union.

So what, you think, how does what happens in the European Union affect me living here in the United States? Every company headquartered in the U.S. that does specific levels of business in the EU is included in the regulations of the *Corporate Sustainability Due Diligence Directive*. PepsiCo is an American company that sells its products in countries all over the world, including EU nations.

In its Annual Report for fiscal year 2023, PepsiCo reported total revenue of \$91.4 billion, 15% of which (\$13.7 billion) came from sales in Europe. This level of revenue puts PepsiCo in the top tier of CSDDD requirements, meaning they must begin the due diligence process NOW, in order to prepare for those obligations beginning in 2027.

Every company in the PepsiCo supply chain will be affected by this directive, from farms that supply the crops for food brands (Frito-Lay, Doritos, Tostitos, Quaker, etc.) and beverages (Pepsi, Mountain Dew, Dr Pepper, 7Up, Gatorade, etc.), companies that package their products, rail and trucking companies that deliver them, and stores that sell them. Pepsicos own due diligence and supervisory divisions will begin contacting each of the supply chain partners ("stakeholders") and impose reporting requirements on each of them. The greenhouse gas emissions targets will also heavily affect PepsiCo as they and all stakeholders will be faced with meeting those emissions targets previously detailed. This will not be optional for the downstream and upstream partners if they are to keep doing business with Pepsico.

You can go to the investment research website Morningstar and look at PepsiCos current "Sustainability" ESG Risk Rating Assessment to see where they currently stand on these issues. (Reference A Clear and Present Danger, Threat #3 – The Great Reset: Ch. 7) PepsiCos risk assessment level is noted as "significant", with top issues being human rights in its supply chain and overall "resource usage." PepsiCo will have to make significant changes to reduce these risks as well as its "carbon footprint." These changes will likely have significant effects on the companies financial situation, which will impact company employees, supply chain workers, those who have money invested with PepsiCo in retirement plans and consumers that buy their products.

"The aim of this Directive is to foster sustainable and responsible corporate behaviour in companies' operations and across their global value chains. <u>The new rules will ensure</u> that companies in scope identify and address adverse human rights and environmental impacts of their actions inside and outside Europe."

"If you want a picture of the future, imagine a boot stamping on a human face—for ever." George Orwell - 1984

Addenda Reference Information:

- * EU Adopts Mandatory Rules on Corporate Sustainability Due Diligence That Will Apply to Many US Companies; Cooley Alert Cooley Law Firm, April 24, 2024
- * Due diligence: MEPs adopt rules for firms on human rights and environment; European Parliament Press Release, April 21, 2024
- * Corporate sustainability due diligence Fostering sustainable and responsible corporate behaviour for a just transition towards a sustainable economy; European Commission website
- * UN Group Releases Investor Guidance For EU Corporate Sustainability Due Diligence Law; Forbes magazine, April 30, 2024
- * Scope 1, 2 and 3 emissions; MIT Climate Portal

Addenda #51, July 2024 Re: Ch. 11, Vehicle "Electrification" by 2050, Impossible!! SDG 7 - Ensure access to affordable, <u>reliable</u>, sustainable and modern energy for all

EV Transition Problems

President Bidens \$2.1 trillion Infrastructure Investment and Jobs Act included \$5 billion in funding for states to build a national EV charging network, and an additional \$2.5 billion for communities and neighborhoods to build local networks of EV chargers. The White House' goal at that time was to have a nationwide network of high-speed chargers, no more than 50-miles apart, on the nation's busiest highways by 2032.

The Infrastructure Act was signed into law in November of 2021. By December of 2023, the Department of Transportation had authorized more than \$2 billion in funding sent to states. Fewer than half the states had even started taking bids from contractors to begin construction of charging projects, and no charging station projects had been installed.

New York state has plans to have 130 plus Level 2 and Level 3 chargers installed at 30-mile intervals along the NY State Thruway by 2025. A total of *eighteen* Level 2 chargers, which can fully charge an EV in 4 to 6 hours, will be located at *nine* of the thirty-three Commuter Park and Ride Lots adjacent to thruway entrances.

Additional Level 2 and Level 3 chargers (which can fully charge a fast-charge-capable EV within 30-minutes) will be located at Thruway Service Areas and Welcome Centers.

By June 2024, just seven EV charging stations had been put into operation through the federal funding program. Most of the other 64,000 plus public EV charging installations have been the result of local community programs and utility company grant programs. But, just how reliable are the public access charging stations that many commuters and recreational drivers will have to rely on?

The state of EV charging in America: Harvard research shows chargers 78% reliable and pricing like the 'Wild West' Harvard Business School report, June 26, 2024

A pioneering scholarly review of 1 million EV charging station consumer reviews [globally], led by a Harvard Business School fellow, <u>reveals widespread dissatisfaction</u> with the current state of EV charging infrastructure. Among other things, the deep dive into tomorrow's gas station network estimates that drivers can successfully recharge their cars using non-residential EV equipment only 78% of the time, highlighting critical issues with reliability.

The Harvard report shows a deep consumer frustration with the lack of charging stations, erratic pricing and unreliability of existing charging stations. These factors only add to EV drivers "range anxiety", the common fear that EV batteries won't maintain enough charge to reach a destination. Charging stations in the U.S. have an average reliability rating of 78%, meaning that about one in five don't work.

EV drivers often find broken equipment when they arrive at a charging station, because no one is maintaining the chargers once they're installed. Charger vandalism is also becoming a factor, as thieves steal the charging cables to scrap the copper they contain for cash. Public charging stations, owned by a mix of providers, all have different pricing models and don't disclose pricing information the way gas stations do on their pumps. This leads to unpleasant surprises *after* charging is complete.

A January 2023 report by S&P Global titled: *EV Chargers: How many do we need?*, stated even when home-charging is taken into account, "charging infrastructure in the US is not robust enough to fully support a maturing EV market." The report estimated that in addition to in-home chargers, there is a need for 1.2 million public charging stations nationwide by 2027 and almost twice that by 2030. Remember, there are just a little more than 64,000 public charging stations currently installed in the U.S. We need, according to the S&P Global report, an additional 1.136 million additional public charging stations to be installed in the next two and a half years.

The lack of available and reliable public charging stations makes electric vehicle adoption by the American public difficult, as indicated by reports of solving EV sales by auto manufacturers and cutbacks in investments in production plants for EVs and batteries. Ford Motor Company reported a loss of \$1.3 billion, or \$132,000 for each of the 10,000 electric vehicles it sold in the first quarter of 2024.

General Motors does not break out financials for EV's but said in 2022 that it expected to continue losing money on electric vehicles until sometime in 2025. Earlier this year GM executives began reevaluating their electrification program, considering producing more plug-in hybrids instead of pure EVs.

Electric SUV maker Fisker, which said in February 2024 that it might not have enough money to survive another year, filed for Chapter 11 bankruptcy protection in June. Fisker hopes it can "reorganize" and find additional financial backers to resume operations at some point.

Note: The Obama-Biden administration Department of Energy awarded Fisker Automotive a \$529 million loan in 2011. It received \$192 million in taxpayer dollars before the credit line was frozen in 2012, after the company failed to meet fuel economy and production goals. Fisker Automotive filed Chapter 11 bankruptcy in 2013 and defaulted on the outstanding balance. (the loan balance was eventually paid off by Fisker and the company that purchased its assets in 2014.) In 2016, Henrik Fisker then started another electric car company, Fisker Group Inc, the company that filed for bankruptcy protection in 2024.

Fisker Group Inc. is the second electric vehicle company to file for bankruptcy in the past two years. Electric bus maker Proterra filed for Chapter 11 bankruptcy protection in August, 2023 (see Addenda #7)

Phoenix Motor, a light-and-medium-duty electric vehicle manufacturer acquired Proterra's electric bus division in November 2023, adding its heavy-duty bus manufacturing line to its business.

Addenda #52 – July 2024

Re: Ch. 15, Sustainable Living – Smart Cities (Control by Authorities), Smart Thermostats (Control by utility companies) SDG 12 - Ensure sustainable consumption and production patterns

Energy Saver Guide: Tips on Saving Money and Energy U.S. Department of Energy website

By following just a few of the simple tips in the Energy Saver guide, you can make your home more comfortable and easier to heat and cool--while you save money... This guide shows you how easy it is to cut your energy use at home and also on the road.

Ch. 26 – Save Electricity and Use Renewable Energy The Smart Home and Your Energy

Smart tools, appliances, and utility programs can help you automate, monitor, and control your home's energy use and make informed decisions about your energy consumption. Some tools you can install on your own; other web-based tools allow you to work with your utility to save energy and money. Check with your utility to find out what options are available in your area.

This Department of Energy brochure, encourages homeowners to "work with your utilities to <u>save</u> energy..." It notes that many utility companies offer programs that "encourage" customers to use energy during off-peak hours, instead of when you would normally want or need to use it.

This section also encourages the use of *smart meters*. (see Ch. 15 Sustainable Living – Smart Homes, and Addenda #14 National Grid Smart Meters)

"They provide two-way communication between you and your utility... This communication helps utilities maintain more reliable electric service."

The DOE brochure promotes consumer monitoring their energy usage so they can "make better-informed decisions about changing your usage patterns and lowering your energy use." This changing of usage patterns includes the utility being able to "remotely adjust your thermostat or operate appliances..."

"Smart Appliances" are Wi-Fi enabled appliances that can connect to an app, enabling consumers to control and monitor their use remotely. (Smart appliances can also communicate with the utility company) Smart appliances include larger appliances like ovens and ranges, refrigerators and freezers, dishwashers, washing machines and dryers. They also include devices like coffee makers, televisions as well as thermostats.

Utility companies are pushing customers to join programs allowing them to communicate with, and control, Smart devices in their homes.

Southern California Edison (SCE), for example, has a "Summer Discount Plan", which involves the utility to install a remote-controlled device on or near the customers air

conditioner. This device enables SCE to turn off or cycle the customers air conditioning unit during "energy events". This earns the customer "bill credits" for allowing the company to turn the A/C off during extended periods of high usage when the weather is hot. SCE lists four different levels of "Comfort Level." The Maximum Savings level allows SCE to turn off you're A/C unit for up to 6 hours per event. For this level of utility control, SCE pays the customer up to \$160 per event, based on how long the shutdown lasts. Other savings levels allow the customer to override the A/C control but pay out less money each time that occurs.

What is an energy event and when does it happen? An SCE Energy Event is a designated time when SCE limits air conditioning usage in participating homes to reduce demand on the energy grid.

Extreme heat events in California are a common occurrence. In 2017 7.3 million residents were affected over two periods totaling 15-days. In 2018,18.7 million affected over one 8-day period. In 2019 one 13-day period affected 28.8 million residents, in 2021 one 11-day period affected 8.6 million residents and in 2022 one 9-day period affected 3 million residents. These are an example of extreme weather events that would trigger an automatic shut down of your air conditioning for six hours, at least one time each day, for several days at a time.

In chapter 9, I detailed the Progressive climate goals of the Democrat leadership forced the closure of all coal fired power plants and made plans to close the states remaining natural gas power plants by 2030, which provide 30% of all the state's electricity generation, and the last remaining nuclear power plant. California is also the nations largest importer of electricity, 30% of all the electricity consumed by residents is imported from other states.

"True" Renewable power sources (solar & wind) only provides one-third of all electricity produced in the state and just one-quarter of all the electricity used. The state already has major problems bringing enough new (unreliable) renewable power sources online that it has had to delay closure of three natural gas plants and the Diablo Canyon nuclear power plant.

Shortages of electricity during extreme weather events not only in California but in other Progressive states will force utility companies to continue to "encourage" their customers to cooperate with remotely limiting electricity use as the imbalance between fossil fuel plant closures and renewable plant openings continue to widen. Addenda #8 & 11 update – July 2024 Re: Ch. 13, Sustainable Consumption – Plant Based Alternatives SDG 12 - Ensure sustainable consumption and production patterns

McDonald's Plant-Based Burger Was A Huge Failure – Here's Why

McDonalds and Agenda 2030 proponents had such high hopes for the "McPlant" burger, but in June 2024 McDonalds pulled the plug on it after it flopped in two U.S. test markets. The McPlant consisted of peas, rice and potatoes, served on the iconic sesame seed bun with condiments. The McPlant debuted in November 2021 and the company expanded the project to 600 locations in four states. Sales dropped from more than 500 burgers per day before the expansion to about 20 per day, and as few as three per day in rural areas.

"I don't think the U.S. consumer is coming to McDonald's or looking for McPlant or other plant-based proteins from McDonalds right now" said McDonalds USA president Joe Erlinger. Sales in European markets are "thriving" according to Erlinger however.

Funny that American consumers don't like to be told (yet) what foods they should or shouldn't eat!

Addenda #8, 30 & 34 update – July 2024

Re: Ch. 8, 2050 Net-Zero Emissions; Impossible!!

SDG 7 - Ensure access to affordable, reliable, sustainable and modern energy for all

Vineyard Wind: Blade debris recovered after offshore "incident" WWLP.com, July 16, 2024 Nantucket Current, July 16, 2024

Developers of a power project in the waters off Massachusetts disclosed Monday afternoon that an "incident" Saturday night led to blade damage on a wind turbine that required the establishment of a safety perimeter and the issuance of notices to mariners in the area. On Monday evening, project officials confirmed that large pieces of debris have been recovered.

The "incident" involved one of its five wind turbines experienced a blade being damaged and breaking into pieces, then washing ashore along Nantucket beaches. "The water is closed to swimming on all south shore beaches, due to large floating debris and sharp fiberglass shards", Nantucket Harbormaster Sheila Lucey said.

The GE Vernova Haliade-X wind turbine has three 351-foot fiberglass blades, one of which "failed". A spokesperson said there was no evidence of engineering design flaw, and indicated it may have been a "manufacturing issue", originating in its manufacturing factory in Canada.

GE Vernova's turbines have made headlines for similar incidents in Germany, Sweden and the U.K. Each incident had a different root cause, including manufacturing issues, transportation and handling.

In October 2023, a turbine blade snapped and partially broke off at the Alfstedt-Ebersdorf wind project in Germany. It was the second time a turbine blade had failed at the site in two years.

In May 2024, a single blade on the same model of GE turbine at the Dogger Bank A offshore wind farm off the northeast coast of England also sustained damage, which officials claimed was caused by an installation error.

At the Odal Vind wind farm in Norway, a Siemens Gamesa wind turbine blade weighing 22 metric tons fell off the machinery in April. Odal Vind had already stopped 15 of the wind farm's 34 turbines because of blade damage linked to a production problem a month before this incident happened.

Following the blade failure, the Bureau of Safety and Environmental Enforcement (BSEE) issued a suspension order directing Vineyard Wind to halt any power production operations and new construction activity.

A wind turbine breaking is "highly unusual and rare," said GE Vernova spokesperson Roger Martella, but Martella couldn't provide officials with the precise number of times something similar has happened at other wind farms around the world... not surprising!

Addenda #53 – July 2024 Re: Ch. 8, 2050 Net-Zero Emissions; Impossible!! SDG 7 - Ensure access to <u>affordable</u>, <u>reliable</u>, sustainable and modern energy for all

Germany passed its first national climate law in 2019 and amended it in 2021, setting a timetable to become "greenhouse gas neutral" by 2045. The *Climate Action Law* set strict emissions targets for industries and transportation to achieve emissions targets. The Climate Action Law set the target to reduce GHG emissions by at least 65% by 2030, compared to 1990 levels, at least 88% by 2040, net GHG neutrality by 2045 and negative GHG emissions after 2050.

According to the German Environment Agency, GHG emissions in 1990 equaled 1,251 million tonnes (mmt) of carbon dioxide equivalent. A 65% decline would bring emissions down to 437.85 mmt by 2030. As of 2023, GHG emissions in Germany were reported as 674 mmt; a reduction of 577 mmt over a 33-year period. Since 1990 emissions have decreased 17.48 mmt per year on average. At this rate by 2030 they should drop to roughly 551 mmt, still 6 years' worth of emissions shy of the target.

Of course, politicians that dreamed up the Climate Action Law, had plans to address the eventual failure of achieving emissions targets. In case of target miss or overshot, the difference would be "evenly spread over the remaining annual emissions budgets of the sector" until 2030/2040/2045.

In other words, when Germany fails to achieve its stated goal for 2030 emissions, it can kick the can down the road claiming they will aggressively reduce emissions in future years to make up for the shortfalls. You might question exactly how committed Germany is, to achieving those stated GHG emissions cuts...

In Germany, wind turbines are being torn down to make way for a coal mine — and RBC is financing it

Wind turbines are being dismantled to make way for a massive coal mine expansion in Germany, and Canada's largest bank RBC is helping pay for it using "sustainable" finance. Canada's National Observer, September 20, 2023

The Garzweiler coal mine has been an active surface mine for more than 100 years. Lignite, a soft coal composed of naturally compressed peat, and the most harmful of all coal to human health and the atmosphere, is used almost exclusively as fuel for steam-electric power plant generation.

The mine sprawls across around 14 square miles (35 square kilometers) in North Rhine Westphalia (NRW) – a huge, jagged gouge in the landscape.

It has slowly expanded outwards over the years, swallowing villages through court approved eminent domain seizure, where families have lived for generations.



Garzweiler mine, North Rhine-Westphalia Germany

In 2013, the owner of the mine, RWE AG, a German energy company, announced plans to expand the mine yet again. This expansion would result in displacement of hundreds of people and the destruction of several villages that dated back to the 1100's. It was thought that 1.3 billion tons of lignite were in this area and RWE planned a huge open mining operation for its removal.

Interestingly, considering Germanys emissions targets, an eight-turbine wind farm also needed to be demolished to make room for the expansion. Government subsidies for the profitable operation of the wind farm, commissioned in 2001, have since expired and the wind farm capable of supplying 2,400 megawatts were deemed to be expendable. Both the German state of North Rhine-Westphalia and RWE has said that they have plans to phase out the mining and use of coal from the mine by 2030. So in six more years, RWE claims it will shut down a profitable coal mine with more than a billion tons of reserves.

I don't believe it for a second.

And now, as Paul Harvey used to say, the rest of the story...

The Royal Bank of Canada (RBC) is financing the expansion of the coal mine with a \$5.4 billion loan. I find this rather odd since Canada also has climate policy pushing net-zero emissions by 2050 and Canada voted to end direct international public finance for coal, oil and gas by the end of 2022 at the United Nations climate change conference, 2021 COP26. A 2023 report from a coalition of environmental groups, the annual Banking on Climate Chaos report, shows that Royal Bank of Canada was the biggest fossil fuel financier in the world last year after providing over US\$42 billion in funding.

But climate change policies are nothing but a hoax and a sham anyway, so the RBC used a loophole to get around the 2022 mandate and make a nice profit on this loan to RWE, known as "sustainable finance."

Sustainable finance is defined as investment decisions that takes into account the environmental, social, and governance (ESG) factors of an economic activity or project, and rewards borrowers meeting these criteria with more favorable interest rates.

RWE receives more favorable terms for its financing this debt if it meets certain targets. These include upping the share of renewable energy versus fossil fuels in its generation portfolio; reducing the carbon dioxide intensity of its plants; and reaching a certain level of capital spending classified as sustainable within the European Union's definitions. Nowhere in RWE's sustainability criteria is it required to actually reduce the amount of planet-warming greenhouse gas emissions it's responsible for, including from the coal the mine expansion will be responsible for!

RWE can continue to mine the most harmful coal for the planet and humans and receive favorable loan terms by claiming they will close the mine by 2030, invest \$55 billion in renewable energy projects between 2024 and 2030, and be climate neutral by 2040.

Climate change is real, and it is caused by the actions of humans. We do need to take action to reduce greenhouse gas emissions, but we need to do it in a carefully planned and financially responsible way. The actions of companies like RWE, the Royal Bank of Canada and the German government which allowed Lützerath to be demolished, only highlight the sham that climate policy has resulted in.